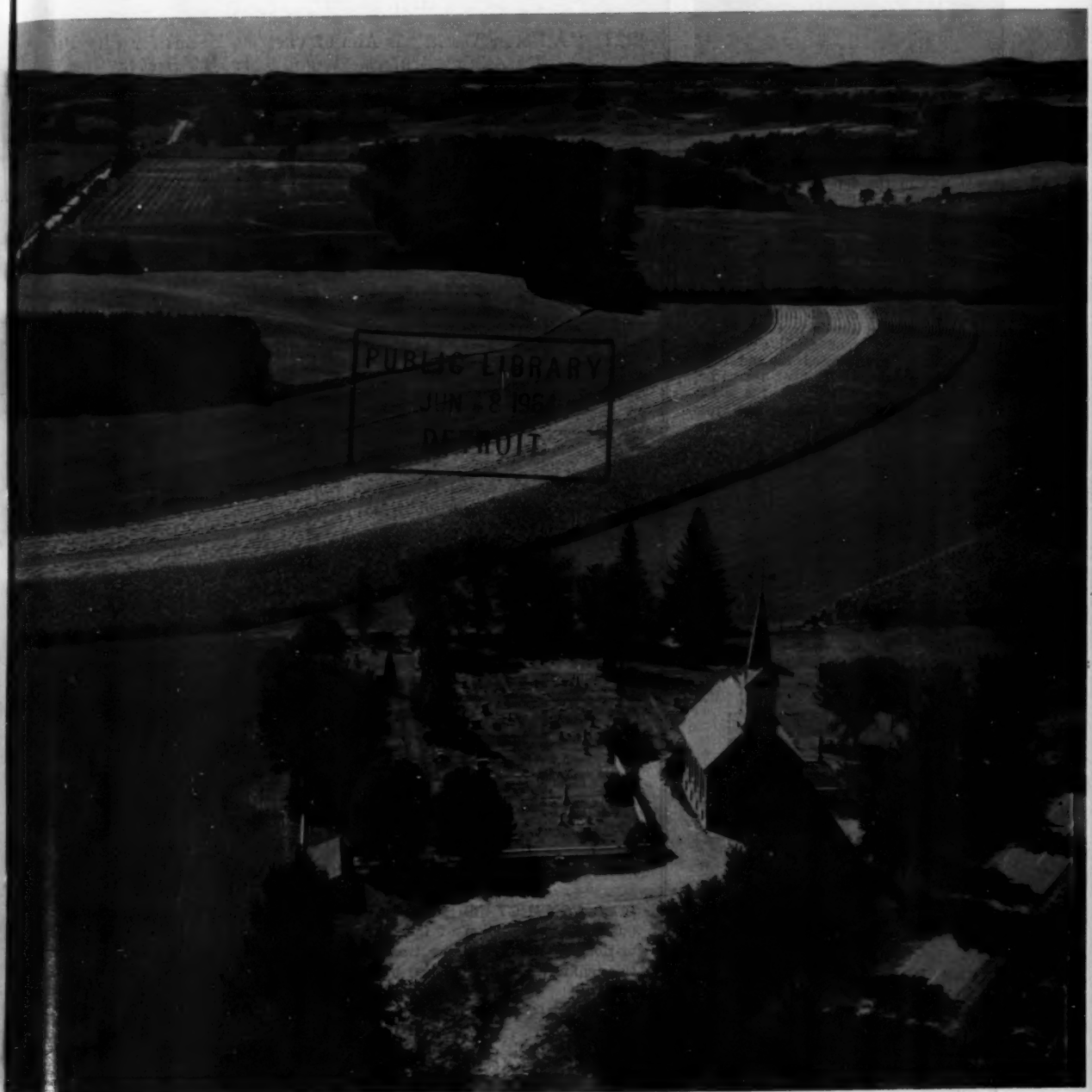
US. 8 S58 S

MAY 1964

Soil Conservation



PUBLIC LIBRARY
JUN 2 8 1964
DETROIT

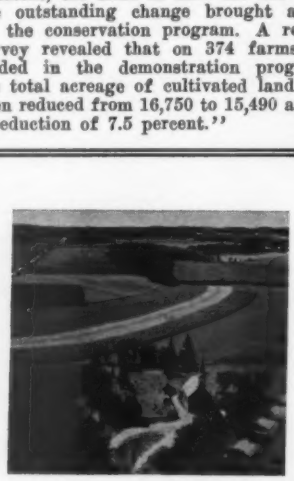
SOIL CONSERVATION SERVICE • U. S. DEPARTMENT OF AGRICULTURE

Soil Conservation
25 Years Ago

"It was in the fall of 1933 that the Soil Conservation Service—then known as the Soil Erosion Service—began operations on this 92,000-acre watershed (Coon Valley soil-erosion control demonstration project near La Crosse in southwestern Wisconsin):

"Today, it is clearly evident that the battle against the erosion menace is being won on the demonstration farms. Literally thousands of small shoestring gullies have been plowed in and completely healed as a result of terracing, contour strip cropping, and the other phases of the program. Dams and trees have effectively controlled larger gullies. Farmers in the area will tell you that erosion losses on controlled land are today but a fraction as great as they formerly were.

"From the standpoint of farm management, the shift in land use has been the outstanding change brought about by the conservation program. A recent survey revealed that on 374 farms included in the demonstration program, the total acreage of cultivated land has been reduced from 16,750 to 15,490 acres, a reduction of 7.5 percent."



COVER PICTURE.—Spiritual values are prominent in the lives of good stewards of the land. Their physical reality is evident in the well tended grounds and conservation-treated landscape presided over by the Big Elk Creek Church in Chippewa Soil Conservation District, Wisconsin.

VOL. XXIX, NO. 10 MAY 1964

CONTENTS

Page

219 Soil Stewardship Week
By Donald A. Williams

221 "A Better World" Is Aim of Vacation Farms for City People
By Adrian Achtermann and Larry R. Decker

223 Great Plains Conservation Program Represents Good Stewardship
By Roland Willis

224 Soil Surveys Basis for Good Soil Stewardship
By Bernhard A. Roth

225 Passion Play Director Also Good Soil Steward
By Perry Eberhart

227 New Horizons in Conservation—Excerpts From SCS 1963 Annual Report

235 Land Today Has New Values
Excerpts from address by Orville L. Freeman

236 Girl Scout Cookies Help Build Lake
By J. R. Sasser

237 People's Souls and Soils Concern Minister—*A Profile*
By Walter S. Allen

238 Beach Owner Stops Waves' Damages
By Gordon S. Smith

240 Book Review

Soil Conservation

ORVILLE L. FREEMAN
Secretary of Agriculture

JOHN A. BAKER
Assistant Secretary for Rural Development and Conservation

DONALD A. WILLIAMS
Administrator, Soil Conservation Service

SOIL CONSERVATION is the official organ of the Soil Conservation Service, published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business. The printing of this publication was approved by the Bureau of the Budget, July 25, 1963.

15 CENTS PER COPY $1.50 PER YEAR

FOREIGN—$2.25 PER YEAR

25 percent discount on orders of 100 or more mailed to one address.

All orders for paid subscriptions go to the Superintendent of Documents, Government Printing Office, Washington, D. C., 20402

"A Time of Reflection"

Soil Stewardship Week

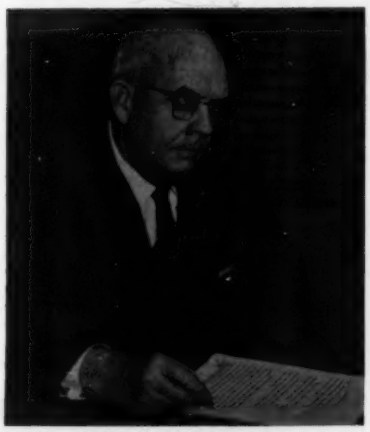
By Donald A. Williams

SOIL Stewardship Week—May 3 to 10—is properly a time of reflection and contemplation by conservationists everywhere.

The basic resources of soil and the water which make the soil productive of all plant and animal life are the foundation of our entire economy. Any activity by which we live from day to day or grow and progress toward a fuller life on this earth inevitably must be related to the use of these basic resources.

Better to guide all of us, on the land and off, in the optimum development of our soil and water resources for their most productive multiple uses as required by our fast-growing and more demanding population, it is important to reflect upon the long strides we have made in their better stewardship on privately owned lands in comparatively recent years.

That is: since Congress 35 years ago authorized establishment of 10 erosion control experiment stations on important types of farmland throughout the country; since the Soil Erosion Service was set up (in the Department of the Interior) and the first soil conservation demonstration project was started in 1933; since the renamed Soil Conservation Service was made a permanent agency in the U. S. Department of Agriculture by an act of Congress in 1935 (Public 46) declaring soil and water conservation to be national policy; since farmers and ranchers in 1937 began organizing their own soil conservation districts under State enabling laws; and since Congress in 1954 broadened earlier flood prevention and small-watershed protection authorizations in Public Law 566.



Donald A. Williams.

In the meantime, soil and water conservation has moved ahead through Great Plains shelterbelt tree planting, farm forestry, water facilities, land utilization, Great Plains conservation, and other programs, including successive programs authorized by the early Agricultural Adjustment Act and its successor Soil Conservation and Domestic Allotment Act. The overall results of all these undertakings together, carried on in the main through local, State, and Federal cooperative efforts, defy accurate statistical accounting. Their extent can be measured best by traveling up and down and across the country, by air or on the ground. Their impact is felt in more profitable and satisfying living enjoyed by hundreds of thousands of farm and ranch families and in the visibly improved economy of thousands of communities that are benefiting from soil conservation district, small-watershed, and related conservation programs in their areas.

If we are to profit from our

The author is administrator, Soil Conservation Service, Washington, D. C.

Gullies like this one in 1956 on Victor Holstein's Washington County, Nebr., farm long were the trademark of soil erosion. They may not have inspired poets, but they are credited with having moved Patrick Henry to say: "He who heals the most gullies is the greatest patriot."

many past successes, hold our gains, and assure the security of our soil and water resources for the future, it is even more important that we contemplate the big and many-sided conservation job that still lies ahead. With the increased demands for attention to watershed, rurban, and other developments in the national action program of soil and water conservation, we have to redouble our efforts to keep on top of that job.

The ever-broadening community concept of conservation, expressed in soil and water conservation district, small-watershed, rural-urban, and other approaches, confirms the fact that we must keep up to date. This is 1964; we have to gear ourselves to 1964 conditions, in conservation research, education, community leadership and action, technical methods, and cost-sharing or other financial assistance.

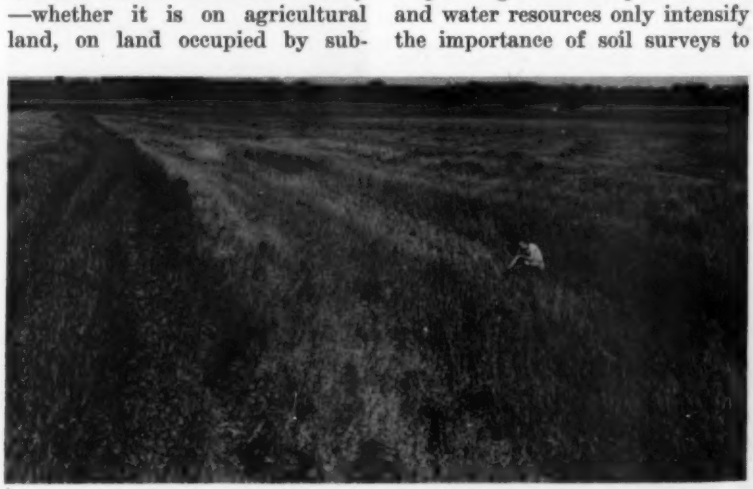
At the start of the soil conservation program, the emphasis was on halting soil erosion—which is no less of basic importance in today's soil stewardship conservation effort. But, as we progressed in conservation technology and experience, we began to pay more attention to sustaining and building soil fertility. Then came renewed emphasis on water management, although the watershed approach in dealing with problem areas as units, rather than relying entirely upon spot treatment of individual farms, was recognized from the outset.

Whether it is in soil and water conservation district operations, in small-watershed projects, through the Great Plains Conservation Program, or in Rural Areas Development, Resource Conservation and Development, recreational or other undertakings, definite basic principles must govern how we treat and manage the resource base. By soil and water conservation today —whether it is on agricultural land, on land occupied by suburban housing or by industries, n land set aside and developed f r recreational use and wildlife, r what have you—we mean:

Proper land use, protecting land against all forms of soil deterioration, rebuilding eroded and depleted soil, and building up soil fertility; improving grasslands, woodlands, and wildlife lands; conserving water for agricultural and other uses; flood prevention, reducing sedimentation in streams, lakes and reservoirs, and harbors; proper irrigation and drainage; and making efficient, profitable, and satisfying use of all our land and water for greater human benefit and enjoyment.

The use and treatment of each acre of land within its capabilities and according to its need continues today, as it has been from the beginning, the bench mark of modern soil and water conservation technology. This simply means using all of our land for the kind of production for which it is best suited—and needed. In short, today's conservation concept takes in all the resources of the community, the State, and the Nation.

There is no call to compromise the basic principles that have proved themselves over the years. Expanding demands upon our land and water resources only intensify the importance of soil surveys to



Uncounted thousands of landowners have demonstrated their "patriotism" in ways similar to that used by Holstein, who a year later had converted the gully into a useful graded waterway protected with grass to drain 400 acres safely.

determine land capabilities, of conservation planning, and of treatment and use of all our lands within their needs and capabilities.

It is of vital concern for all of us, as stewards of the soil in our own right or as taxpayers and consumers of the land's bounty, to pay careful and deliberate attention to the opportunities and responsibilities bearing upon the future course of natural resources management and of the individual and public welfare tied in so closely with these resources. We are faced on every hand with new and growing problems affecting those resources and our welfare. These include, besides our fast-increasing population, competition for space for living and for recreation; multiplying demands upon economically available water supplies by agriculture, industry, municipalities, and recreational interests; problems of soil erosion and of stream pollution and sedimentation; and so on.

Today is the time to plan and to take remedial or preventive action, as may be necessary, with respect to remaining land, water, timber, and wildlife resources—to use the "tools" that are available for resource development in cooperative efforts involving agencies of the local community, the State, and, where necessary, the Federal Government.

The agricultural, commercial, industrial, and recreational potentials of America are almost without limit. Included in their base are the natural and human resources of every State, county, and local community. The full development of those potentials rests in the hands of farmers, industrialists, and businessmen, civic leaders and public officials, teachers and clergymen, other professional people, and those in the ranks of labor. In their hands, in any area, lies a future that can be better than any past we have ever known.

They—all of us—are the stewards of our soil!

"A Better World" Is One Aim of Vacation Farms for City People

By Adrian Achtermann and Larry R. Decker

THE 371-acre Floyd Jones farm in southwestern Holmes County is a model of conservation soil stewardship and one of Ohio's growing number of farms providing summer vacation accommodations for city people. The Franklin Fuss farm in Carroll County, the second county east of Holmes County, is another.

The Joneses were among 10 farm families in the Holmes Soil and Water Conservation District who organized the Holmes Hills Vacationland Association in the spring of 1963 to add to their income by taking in vacationers from the city and helping to acquaint them with living "down on the farm." Families visiting those farms last year learned quickly that there was a great deal to enjoy—and to learn. Fishing, camping, riding, hiking, and helping with the farm chores were among the experiences the visitors had during their stay.

"I never realized how much a man had to know to operate a farm," Frank Clover from Canton said of his farmer host. "Why, it takes the organizational ability of a corporation officer to run a business like a farm. And the amount of work that he and one hired man do in 1 day's time is unbelievable!"

Jones, his wife, and four children are active in community, church, and county activities. He has been on the district board of supervisors for 11 years.

The Joneses learned, too, from their visitors. As Mrs. Jones said afterward: "It was such a fine experience for our children to make

Christine and Becky Clover and Danny Jones are pleased at their success at getting close to Rusty, the pony.

The authors are work unit conservationist, Millersburg, and work unit conservationist, Carrollton, both of the Soil Conservation Service, Ohio.

Guest Christine Clover takes her sister Becky and Danny Jones for a boat ride on the farm pond.

new contacts and learn about kids from cities." They especially enjoyed one family that had a gifted 9-year-old blind daughter. She played the piano for the Joneses, and the three Jones girls read stories for her; and both families got a better understanding of the countryside by describing for her things that most people hardly notice on a farm.

Mrs. Jones plied her summer visitors with roasting ears, fish fresh from the conservation farm pond, home-grown beef, and all the fresh milk they could eat. The guests worked up hearty appetites walking through the conservation-treated fields, swimming, and using outdoor recreation facilities provided for them.

The Joneses' guest have ranged from businessmen to mothers with their children, from as far away as Texas. Some expressed surprise at the complexity of the farming operation. One man from Cleveland, for example, said he was startled to find that cows had to be milked twice a day! Another Cleveland family came back for the Holmes County fair. An Akron fisherman reflected the reaction of a number of the visitors:

"The fishing here is as good as any place I have seen. The quiet and relaxed atmosphere is something that I haven't really had for some time."

"With the success that we have had in our first year of offering farm vacations to city people, it is quite evident that there is a need for this," Jones has concluded as he goes into the second summer in the farm vacations business. "We will continue, and try to encourage our friends and neighbors to offer their homes and themselves to others. This way, we help to build a better image of farming as well as learn about city living. We all are striving for a better understanding of our fellow man. In this program, we are trying to do our part in bringing the rural people and the city people closer together for a better world in which we live."

In Carroll County, 11 vacation farms are listed in a brochure distributed yearly by the Carroll Vacationland Association to outlets in Akron, Canton, Cleveland, Columbus, and in Pittsburgh, Pa. More than 5,000 were sent out last year, and 7,000 were printed this year. The Association idea started with the county's own rural people.

In 1962, there were thirty-five paid farm guests, 200 in 1963, and reservations have been piling up for 1964. Most are by the week, but some vacationers prefer just weekends. Rates run about $40 a week for adults and $25 for children. As many as 80 persons were handled, in 4 months, by 1 farm last year. Figuring an average family of 4, this meant about $2,600 extra income.

The Carroll County hosts also find most vacationers are interested in the operation of a farm, with "haying time" a favorite.

"I almost had to take a combine apart to show one fellow how it worked." Franklin Fuss, who has a 174-acre dairy farm north of Carrollton, said.

The Fusses have had people all the way from New York. Mrs. Fuss said most all of the women guests like to work in her garden.

"We are thinking of going into a year around business, by putting in a ski slope and a place to skate and toboggan," Fuss explained. "With farming the way it is, and getting tougher, it is difficult to make a decent living. Recreation will be the answer for some of us."

TRAVEL TO REMEMBER

As far as the good grass goes, this picture could have been taken in 1861—when travel was slower but conservation came more naturally than today—instead of during the Kansas Centennial. It was taken during a rerun of the Butterfield Trail, on the Charles Stewart farm southeast of Quinter in the Gove County Soil Conservation District.

◆

Under normal conditions, 50 percent or more of the water lost during the growing season is through evaporation from the soil surface.

Great Plains Conservation Program Represents Good Soil Stewardship

By Roland Willis

GOOD soil stewardship is the essence of the Great Plains Conservation Program whose Federal cost-sharing provisions already have helped some 14,000 farmers and ranchers in 10 States to arrange for planting grass on about a million acres of cropland that was threatened by wind erosion.

Plains ranchers meanwhile have reseeded half a million acres of wind-damaged or threatened grazing land since the program began actual operations late in 1957. Stockwater developments, irrigation system improvements, and other conservation measures aimed at forestalling future "dust bowls" and dispossessed families like those in the 1930's also are going onto the land in soil conservation districts and watersheds with GPCP help, from North Dakota to Texas.

The program is administered by the Soil Conservation Service. Local soil conservation districts have furnished leadership from the beginning; and other agricultural agencies—Farmers Home Administration, Agricultural Stabilization and Conservation Service, and the Extension Service—all have helped the people who own and operate the land.

The program was tailored especially for areas like that around Lubbock, Tex., for example. In past years, this part of the Texas High Plains earned a name as a wind erosion area. Farmers here grow cotton and grain, both on dryland and under irrigation—and cotton land, without cover, blows in the winter.

The irrigated land has problems of its own including loss of soil and water waste from rainstorm runoff and unretarded flow of expensive irrigation water, which comes mainly from wells. Rangeland, too, suffers from wind erosion, particularly in drought years; and brush has moved in on thousands of acres, using up soil moisture and crowding out grass needed for livestock forage.

Thousands of farmers in 11 counties around Lubbock recognized these problems and were eager to fight them by switching from row crops to grass and livestock or with other conservation measures; but there was the matter of the cost, sometimes high. They had to do it as they could. Changing to grass and livestock, to illustrate, means the interruption of income from the land involved for a year or two. Not every operator can finance even such a temporary loss on his own.

Grassed waterway, terraces, and contour farming in Texas.

A farmer in the Lubbock area was one of the first three in the Great Plains to enter the new program, in late 1957. In this area alone, 1,052 farmers and ranchers, whose units total 973,950 acres, developed complete soil and water conservation plans in the ensuing 6 years, more than 200 of whom have completed their plans. Cost-sharing under the GPCP is only for the contracted acreages and practices on a participant's farm or ranch, but the whole unit must

Midland bermudagrass pasture established under Great Plains Conservation contract on Horace Gilmore farm, Morton, Tex.

The author is area conservationist, Soil Conservation Service, Lubbock, Tex.

have a conservation plan to be eligible.

At the same time, cost-sharing obligated in the 11 counties totaled nearly $4 million, about $1 million of which has been paid as owners completed steps in their plans.

Getting erodible cropland, which was not paying its way, into protective and profitable grass cover, is one of the main objectives of the Great Plains Conservation Program—and one vitally affecting the economy of the Lubbock and other areas. There has been 16,000 acres of this cropland conversion successfully done in this Texas area. As good pasture or range, this land no longer blows when the wind is high; and it is contributing to the stability of the individual farm family and to the economy of the community.

In an area of widely varying rainfall, averaging 19 inches a year, terraces with grassed waterways are among other practices Lubbock area farmers and ranchers are using in their stewardship of their soil. Thus where farms have been troubled by rapid runoff from neighboring land, building diversion terraces sometimes is the solution.

A complete conservation cropping system, based on the capability of the land and its needs, is applied by the producer to improve and maintain the productivity of his soil. Contour farming is winning wide acceptance as a measure for protection of the land and for more efficient farming. This practice includes the management of crop residues to help prevent wind erosion and reduce evaporation. Contoured furrows hold normal rain and snow water on the land, with terracing lending support in high intensity downpours.

As farmers turn more to livestock, they must add stockwater facilities. On rangelands, they drill wells and build ponds for water. Cross-fencing helps in the conservation management of their grass; and brush control has been shown to be a dividend-paying investment.

Soil Surveys Basis for Good Soil Stewardship

By Bernhard A. Roth

GOOD soil stewardship today is based more and more upon soil surveys which tell both farm and city people whether their land is suitable for crops or building they may be planning.

Soil Conservationist Sherman Chase and Richard Erickson, Planning Director of the Southeastern Connecticut Regional Planning Agency, discuss soil map for a town in the New London Soil Conservation District.

Protection from chaotic development on ill-suited areas is seen, for example, in widespread action taken by Connecticut and Rhode Island town planning bodies to gather scientific soil information before moving ahead.

Nearly half the townships in Connecticut and a third of those in Rhode Island have obtained specially prepared soils maps of community lands from the Soil Conservation Service.

Maps defining soil areas suitable or limited for housing, industry, recreation, and other community uses already have been furnished to 78 of Connecticut's 169 townships. They cover 1,388,632 acres. Similar aid has been supplied to 10 of Rhode Island's 32 towns, where the areas mapped for community guidance total 175,910 acres.

Soil surveyors in the field are compiling information for 15 more township planning councils that have forwarded requests to the SCS through the 11 soil conservation districts in the two-State area.

The author is field information specialist, Soil Conservation Service, Upper Darby, Pa.

Family Farms & Recreation

Most farms in the United States continue to be a family business. Even though farms are getting bigger, U. S. Department of Agriculture figures show that operators and family members are the risk-taking managers doing most of the farmwork.

The report also shows more total sales of farm products coming from farms doing $40,000 or more annual business. Farms with sales between $40,000 and $100,000 more than tripled from 1939 to 1959; and those with marketings of $100,000 or more increased from 5,000 to 20,000 in that period. For all farms, 70 percent of the marketings came from family farms. Hired managers are found principally on farms in the above–$100,000 marketing group, but even of those, only 13 percent had hired managers in 1959.

Meanwhile, more than 51,800 organized church, youth, recreation, and other groups with 8.9 million members lease or have permits to use 39 million acres of privately owned farm and other land for outdoor recreation. Reporting results of a nationwide survey made by the Soil Conservation Service for the early 1964 meeting of the Rural Areas Development Advisory Committee, Secretary Orville L. Freeman said using organizations also include sportsmen, employee associations, ski clubs, and others.

Leases and permits reported involved 47,324 land owners and operators, 27,392 of whom received some kind of income or other economic returns from the using groups. The survey was made in cooperation with 2,940 soil and water conservation districts organized and operated by farmers and ranchers. More than 17,000 rural-urban groups also have received conservation help from the SCS.

The most unusual part of Glenn Brown's job as manager of Josef Meier's conservation ranch is tending the camels used in the Black Hills Passion Play.

Passion Play Director Also Good Soil Steward

By Perry Eberhart

GOOD soil stewardship comes naturally for Josef Meier as leading actor and director of the American version of the "Passion Play" produced on his ranch in the South Dakota Black Hills just north of Spearfish.

The Passion Play was at its height, in western Europe, during the Middle Ages; but in modern times its chief production has been once every 10 years at Oberammergau in the Bavarian Alps. Among earlier forerunners of this dramatic portrayal of Christ's death that sometimes are mentioned were the Abydos Passion Play of Egypt, on the death and resurrection of the deity, Osiris; those celebrating the god, Temmuz (the Greek Adonis), in Syria; and portrayal of the story of Dionysus in Crete.

It was Meier and 10 actors who brought to America from his birthplace of Lunen, Germany, the play they dated back to the year 1242. After years of study and training, Meier advanced to play the leading role—in which he since has given more than 5,000 performances—and to become the play's director. The year after he became a citizen of the United States, in 1938, he established the permanent home for the play in the Black Hills, where a natural amphitheater provided a wide view of terrain that looks much like the

The author is field information specialist, Soil Conservation Service, Denver, Colo.

Rambouillet ewes grazing on the ranch of Josef Meier, director and leading actor in the Black Hills Passion Play near Spearfish, S. Dak.

Holy Land did nearly 2,000 years ago—even to camels Meier keeps for use in the play!

The remoteness of the location made for a few slow years before the fame of the production spread, but today thousands of people from throughout the world come to view the American Passion Play. A second amphitheater, in Florida, was completed in 1952.

When he was certain the play would survive its first years here and become a permanent fixture in the Black Hills, Meier bought a small ranch just outside of Spearfish. He has added to it over the years, and now operates a 1,000-acre farm and ranch which can be seen from the Passion Play amphitheater and owns another 200 acres of ranch and timberland near the theater.

As the Passion Play is presented, three times a week, in Spearfish from June until September, Meier is able to spend much time on the ranch. In winter, when the play is presented in Lake Wales, Fla., and in other months when the company is touring, he maintains close touch with his manager, Glenn Brown. A perfectionist in ranching as he is in acting and in directing the Passion Play, Meier became an early cooperator, in 1946, with the Lawrence County Soil Conservation District; and he has carefully carried out his complete soil and water conservation plan with technical help from the Soil Conservation Service.

All but 120 acres of Meier's main ranch is rangeland. Fifty acres is irrigated and rotated between grass and crops, mostly corn and oats. Another 90 acres is dryland. The 200 acres adjacent to the Playhouse is rangeland, used primarily for horses and timberland, from which he cuts some pulpwood and uses for camping by Scout and church groups and others who come to see the play.

The practices called for in Meier's conservation ranch plan include irrigation land leveling, terracing, crop rotation, use of crop residues, and proper range use. Other conservation measures planned are pasture planting, irrigation structures, grassed waterway, a farm pond for livestock water, deferred grazing of native rangeland, and woodland management.

Meier is a longtime advocate of the conservation rancher's rule of "taking half and leaving half" of the season's volume of grasses. All 850 acres of native pasture is cross-fenced so he can rotate grazing on three pastures. Meier plans to double his 40 cows since conservation has increased the carrying capacity of his range. In addition, Ranch Manager Brown runs about 50 Rambouillet ewes of his own, and there are also horses and burros used in the Passion Play—and the camels, which draw curious tourists. He keeps nine, usually four on the main ranch and the others are in a grazing area adjacent to the Playhouse. Only two ordinarily are taken along for the road shows.

As on his ranch, Meier has applied erosion control measures on the steep slope which the amphitheater occupies above Spearfish. These include concrete turnouts, channels, and other drainage structures to prevent erosion on the hill; terracing along the edge of the theater seats; and grasses, shrubbery, and small trees both here and along the open area separating the audience from the various stages needed in the performance.

Have You Seen?...

● "Community Watershed Planning," by the Soil Conservation Service, USDA Program Aid 528. Small-watershed projects have made flood prevention a reality to millions of rural, suburban, and city people. This booklet shows that the need to protect people, land, and property from flood damages and water shortages is urgent. Watershed planning and resource development bring community improvement and multiple agricultural, municipal, recreation, and wildlife benefits. Ten pages tell about a few of the numerous small-watershed projects finished or under construction in the Northeast.

● "Rural Recreation Enterprises for Profit," USDA's Agriculture Information Bulletin 277. Addressed to private landowners and operators, this bulletin offers suggestions and lists opportunities for using farmland for income-producing recreation, and for small-watershed or other community recreational developments. It also covers legal problems and financing and other business angles.

New Horizons in Conservation

Excerpts From the 1963 Annual Report of the Soil Conservation Service

New programs and new interests challenge the skill and ingenuity of soil conservationists as the Department of Agriculture puts into effect policies set forth by its Land and Water Policy Committee and incorporated in the Food and Agriculture Act of 1962.

New activities stemming from the Act include: (1) Resource Conservation and Development projects, being planned in many areas and approved in 10 as of May 1; (2) a Cropland Conversion Program, now underway in 41 test counties; (3) cost-shared recreation developments in small watershed projects; and (4) financial and technical assistance for rural recreation enterprises on private land.

These and other new responsibilities involve the Soil Conservation Service and soil and water conservation districts with the whole range of land uses for the benefit of all the people. Their work no longer is limited primarily to helping farmers control erosion and improve soil productivity. It extends to solving land and water problems of urban and suburban communities and seeking balanced land use patterns that serve the total public welfare.

The 1963 Annual Report of the Soil Conservation Service reflects the broadened scope of its responsibilities and activities. Fiscal 1963 was the first full year of operation of the revised time and progress reporting systems since they were converted to automatic data processing procedures. The resulting statistical summaries, although somewhat delayed in the first year, permit a much more complete picture of conservation accomplishments on the land than was ever possible before.

This report provides a useful bench mark of progress as we move into broader fields of conservation activity.—D. A. WILLIAMS, *Administrator.*

THE extensions of the resource conservation and development activities of the Department and of the Soil Conservation Service show a growing recognition of the fact that *conservation is a community service.* It is of concern and of value to all people, both rural and urban; not limited to helping farmers improve productivity and profits by preventing soil erosion.

"The land and water resources of the United States are vital national assets," said the Land and Water Policy Committee in its report. "How we conserve, develop, and manage these natural resources will affect our economic growth, the strength of our Nation, and our long-run status in world affairs."

The major part of these natural resources are privately owned and operated under the laws of the 50 States. Seventy-one percent of the total land area of the United States mainland and 61 percent of the 50 States is held by private citizens or in trust for Indians. Another 5 percent is owned by States and local governments.

The Department of Agriculture has the major responsibility for cooperative programs with States and local governments to conserve, develop, and manage soil, water, grass, forest, and wildlife habitat on private and other non-Federal lands. This gives the Department a principal role in the total job of resource conservation and development for the national welfare.

Service to Urban Fringe Areas

In response to growing demand from municipal and county officials and citizens' groups concerned with land use planning and soil and water problems in urban and suburban areas, the Soil Conservation Service increased consultive assistance and soil survey work with these groups in fiscal year 1963.

Service to urban and suburban people consisted mainly in providing soil surveys and related information useful in guiding urban expansion and in combating runoff, erosion, and sediment problems in urban fringe areas.

Soil surveys were accelerated in areas of urban development and SCS technicians combined their knowledge and experience with that of specialists in engineering and urban planning to provide local guides for land use and conservation.

SCS has headquartered soil conservationists in a few urban fringe areas to work specifically on nonagricultural land use problems, but most such service is provided by the regular staffs assigned to work through soil conservation districts.

Rural Recreation

The Soil Conservation Service in fiscal 1963 intensified its attention to the improvement and use of outdoor recreation resources on privately owned rural land. It encouraged the establishment of income-producing recreation enterprises that would bring increased income to farm families and provide new recreation opportunities to meet the growing demand from

SUMMARY OF PROGRESS, FISCAL YEAR 1963
Soil and Water Conservation in the United States

Progress items	Unit	Accomplished in fiscal year 1963			Cumulative to June 30, 1963
		By use of funds under all SCS programs	By State employees & other agencies	Total reportable progress	
INDIVIDUAL CONSERVATION PLANS AND SERVICES					
District cooperators	No.	114,441	344	114,785	1,979,151
District cooperators	Acres	39,712,935	52,901	39,765,836	634,928,801
Cooperators canceled	No.	68,754	82	68,836	—
Cooperators canceled	Acres	18,143,563	7,980	18,151,543	—
Landowners assisted	No.	1,023,444	18,082	1,041,526	—
Services provided	No.	3,118,048	50,828	3,168,876	—
Owners applying practices	No.	657,914	7,915	665,829	—
Basic plans prepared:					
Farm	No.	97,434	800	98,234	1,403,232
Ranch	No.	4,567	—	4,567	54,589
Other	No.	2,664	1	2,665	14,839
(Total basic plans)		(104,665)	(801)	(105,466)	(1,472,660)
Farm	Acres	20,847,184	143,639	20,990,823	285,284,974
Ranch	Acres	15,900,847	—	15,900,847	167,039,691
Other	Acres	385,886	27	385,913	3,016,364
(Total basic plans)	Acres	(37,133,917)	(143,666)	(37,277,583)	(455,341,029)
Basic plans canceled:					
Farm	No.	44,874	242	45,116	—
Ranch	No.	1,626	—	1,626	—
Other	No.	244	—	244	—
(Total plans canceled)	No.	(46,744)	(242)	(46,986)	—
Farm	Acres	8,032,433	38,718	8,071,151	—
Ranch	Acres	4,831,413	—	4,831,413	—
Other	Acres	136,516	—	136,516	—
(Total plans canceled)	Acres	(13,000,362)	(38,718)	(13,039,080)	—
Basic plans revised:					
Farm	No.	30.350	151	30,501	—
Ranch	No.	2,293	—	2,293	—
Other	No.	87	—	87	—
(Total plans revised)	No.	(32,730)	(151)	(32,881)	—
Farm	Acres	8,490,267	32,771	8,523,038	—
Ranch	Acres	8,888,548	—	8,888,548	—
Other	Acres	34,734	—	34,734	—
(Total plans revised)	Acres	(17,413,549)	(32,771)	(17,446,320)	—
CONSULTIVE SERVICES					
Services provided	No.	61,268	600	61,868	—
OPERATING UNITS					
Total operating units	No.	—	—	—	4,798,097
Total operating units	Acres	—	—	—	1,354,558,970
Other units	No.	—	—	—	1,731,172
GROUP CONSERVATION PLANS AND SERVICES					
Irrigation:					
Group investigations	No.	711	—	711	4,330
Group investigations	Acres	529,671	—	529,671	6,214,124
Group plans prepared	No.	519	—	519	4,014
Group plans prepared	Acres	453,317	—	453,317	5,065,024
Landowners in group	No.	6,595	—	6,595	65,374
Drainage:					
Group investigations	No.	2,230	86	2,316	20,671
Group investigations	Acres	893,913	7,901	901,814	14,915,429
Group plans prepared	No.	1,753	61	1,814	22,643
Group plans prepared	Acres	539,556	4,736	544,292	14,398,472
Landowners in group	No.	7,683	132	7,815	123,209
Erosion control:					
Group investigations	No.	157	9	166	1,134
Group investigations	Acres	155,712	871	156,583	2,250,192
Group plans prepared	No.	116	5	121	950
Group plans prepared	Acres	68,633	789	69,422	1,395,121
Landowners in group	No.	491	16	507	13,325

city people.

In its regular assistance to land owners and operators in soil conservation districts, SCS has always helped cooperators use their land and water in ways that increase fish and wildlife and create pleasant surroundings for outdoor recreation. More than a million farm ponds and lakes, and many other conservation practices that contribute to the interest and beauty of the rural landscape, already are being used by farmers and ranchers as a basis for income-producing recreation enterprises. Small watershed projects also have produced an unforeseen harvest of water-based recreation on the small lakes created by floodwater-retarding structures.

Following enactment of the Food and Agriculture Act of 1962, Secretary's Memorandum No. 1516 in November 1962 assigned to the Soil Conservation Service leadership for the Department's activities in developing outdoor recreation on non-Federal rural land.

During the year SCS participated with other agencies of the Department and provided liaison with Federal, State, and local groups in developing policies and procedures for the Department's stepped-up program of outdoor recreation development. SCS carried on an intensive training program for its own field personnel and assisted with workshops for Farmers Home Administration personnel dealing with income-producing recreation enterprises.

A survey of recreation activities by field units of the Service revealed that more than 9,800 land owners and operators cooperating with soil conservation districts established one or more income-producing recreation enterprises in fiscal 1963, and another 9,000 plan to install such enterprises. Some 945 operators have adopted recreation as the primary source of income on 237,000 acres, and at least an equal number plan to make such a change in land use. In the course of their work, SCS field men discussed recreation as possible land use with more than 39,000 district cooperators.

Rural Areas Development

Soil and water conservation programs from the beginning have contributed directly to the Rural Areas Development objective of the Department—better living for rural people, both farm and nonfarm. Since natural resources form the physical basis of any economic development, the land use adjustments and conservation measures accomplished in the past 30 years through soil conservation districts and small watershed projects amount to a major development in many communities.

The Soil Conservation Service in fiscal 1963 further reoriented its efforts to help rural areas expand employment and income opportunities through resource conservation and development.

SCS provided technical assistance to 2,008 county and area Rural Areas Development Committees and to 2,785 Technical Panels working on local programs of economic development. This help included providing soil surveys, land inventory and capability interpretations, and guidance on site locations for project construction, public facilities, recreation developments, and the like. By June 30, these groups had produced more than 600 Overall Economic Development Programs including land use adjustment and resource conservation.

Resource Conservation and Development Projects

The first Resource Conservation and Development project was approved by the Secretary of Agriculture in May 1963. On-the-ground planning and operations were deferred pending the first appropriation for this new program in fiscal 1964.

Secretary's Memorandum No. 1515, in November 1962, directed agencies of the Department to cooperate in extending assistance to local sponsors in planning and carrying out comprehensive programs of land conservation and land utilization in areas of several adjoining counties or watersheds.

These projects are intended to speed up conservation activities where they may be expected to provide additional economic opportunities to local people.

By June 30, 1963, the Department had received 16 applications for assistance covering 22 million acres. The first approved project, in the Lincoln Hills area of southern Indiana, includes slightly more than a million acres in 4 counties. It is planned to provide water development, recreation and tourist development, industrial development, land use adjustments, and improved marketing and use of agricultural and forestry resources of the area.

Inventory of Conservation Needs

Results of a National Inventory of Soil and Water Conservation Needs were published in August 1962 as USDA Statistical Bulletin 317, *Basic Statistics of the National Inventory of Soil and Water Conservation Needs.*

An interpretive report of the Inventory is in press and a brief digest is available in Agriculture Information Bulletin 263, *Agricultural Resources: Capabilities, Uses, Conservation Needs.*

Conservation Needs Inventory data have already been used by the Department in many ways in operational planning, in developing new programs, and in regional investigations, river basin surveys, and research.

Progress in Soil Conservation Districts

Soil conservation districts continue to be the predominant means of getting soil and water conservation work applied to the land, despite the broadening range of activities and programs in which

SUMMARY OF PROGRESS, FISCAL YEAR 1963

Progress items	Unit	Accomplished in fiscal year 1963			Cumulative to June 30, 196
		By use of funds under all SCS programs	By State employees & other agencies	Total reportable progress	
GROUP CONSERVATION PLANS AND SERVICES (Continued)					
Flood prevention:					
Group investigations	No.	34	—	34	114
Group investigations	Acres	215,566	—	215,566	3,188,160
Group plans prepared	No.	19	—	19	28
Group plans prepared	Acres	74,548	—	74,548	2,109,027
Landowners in group	No.	158	—	158	593
Total group services	No.	40,872	803	41,675	—
GREAT PLAINS CONSERVATION PROGRAM					
Applications received	No.	3,885	—	3,885	16,503
Applications received	Acres	6,145,655	—	6,145,655	37,184,653
Contracts signed	No.	2,852	—	2,852	12,393
Contracts signed	Acres	5,051,330	—	5,051,330	28,438,161
Contract modifications	No.	10,551	—	10,551	37,197
Contracts terminated:					
By mutual consent	No.	38	—	38	215
By mutual consent	Acres	52,749	—	52,749	565,790
For cause	No.	55	—	55	232
For cause	Acres	70,987	—	70,987	212,996
By expiration	No.	989	—	989	1,504
By expiration	Acres	1,418,681	—	1,418,681	2,293,088
(Total terminations)	No.	(1,082)	—	(1,082)	(1,951)
(Total terminations)	Acres	(1,542,417)	—	(1,542,417)	(3,071,874)
Cropland before GP contract	Acres	753,857	—	753,857	3,741,235
Planned cropland conversion	Acres	191,826	—	191,826	861,303
AGRICULTURAL CONSERVATION PROGRAM					
Referrals received F.Y. 1963	No.	362,143	398	362,541	—
Referrals received P.Y. 1962	No.	—	—	—	387,594
Referrals serviced F.Y. 1963	No.	350,488	5,659	356,147	—
Referrals serviced P.Y. 1962	No.	—	—	—	372,519
CROPLAND CONVERSION PROGRAM					
Forms ASCS-312 received	No.	3,733	—	3,733	—
Assistance completed	No.	3,670	—	3,670	—
CCP referrals received	No.	446	—	446	—
CCP referrals serviced	No.	76	3	79	—
SOIL SURVEYS					
Standard soil surveys:					
High intensity mapping	Acres	1,679,986	170,704	1,850,690	19,629,475
Medium intensity mapping	Acres	27,687,492	3,628,510	31,316,002	393,061,126
Low intensity mapping	Acres	12,151,236	1,127,217	13,278,453	48,589,291
(Total mapping)	Acres	(41,518,714)	(4,926,431)	(46,445,145)	(461,279,892)
High intensity conversions	Acres	868,065	—	868,065	—
Medium intensity conversions	Acres	16,174,562	294,574	16,469,136	—
Low intensity conversions	Acres	657,664	—	657,664	—
(Total conversions)	Acres	(17,700,291)	(294,574)	(17,994,865)	—
Reconnaissance mapping	Acres	1,331,560	6,120	1,337,680	12,898,759
Reconnaissance conversions	Acres	323,590	—	323,590	—
Soil conservation surveys	Acres	3,862,828	21,315	3,884,143	323,955,120
Soil conservation surveys canceled or converted	Acres	23,622,860	191,773	23,814,633	—
Supplemental soil surveys	Acres	918,119	17,503	935,622	—
SNOW SURVEYS & WATER SUPPLY FORECASTING					
Snow course measurements	No.	3,183	436	3,619	—
Aerial snow marker readings	No.	394	55	449	—
Precipitation gage readings	No.	918	121	1,039	—
Soil moisture readings	No.	1,175	152	1,327	—
River stations for which numerical forecasts issued	No.	812	—	812	—
Numerical forecasts issued	No.	1,796	—	1,796	—

the Soil Conservation Service participates.

In fiscal 1963, 93 percent of the land owners and operators assisted by SCS activities were served as cooperators of soil conservation districts. The remainder received assistance through watershed protection, Great Plains Conservation, or other programs administered or assisted by SCS. Eighty-eight percent of soil surveys were made in soil conservation district operations.

The Soil Conservation Service assisted more than 1 million land owners and operators, of which 665,829 applied one or more conservation practices. Assistance was provided to 964,166 individuals through districts, to 53,499 through watershed projects, 5,779 through the Great Plains Conservation Program, and 18,082 through employees of States or other agencies assisting districts.

Soil conservation districts also are providing increasing leadership for the growing programs of rural areas development, rural recreation, land use planning in urban fringe areas, and other new aspects of resource conservation and development.

Organization of Districts

At the close of fiscal 1963, the Soil Conservation Service was assisting 2,942 conservation districts in the 50 States, Puerto Rico, and the Virgin Islands.

Twenty-eight new districts were formed during the year, and 15 existing districts were discontinued as a result of consolidation, subdivision, or other changes in territory. The net increase of 13 in number of districts resulted in an increase of 13.1 million acres in area to bring the total to 1,718.9 million acres.

These districts contain 97 percent of the farms and ranches, and 93 percent of the land in farms, in the United States. Twenty-four States and the 2 Caribbean territories are completely covered by districts.

Conservation Planning

Soil conservation districts added 114,785 new cooperators in fiscal 1963, bringing 39,765,836 acres under agreement to be planned for conservation treatment. As of June 30, districts had 1,979,151 cooperators operating 634,928,801 acres.

District cooperators prepared 105,466 basic conservation plans on 37,277,583 acres with SCS technical assistance and revised 32,881 plans on 17,446,320 acres. At the end of the year, 1,403,232 district cooperators had basic plans on 455,341,029 acres.

In addition to individual farm and ranch conservation plans, SCS helped prepare 2,473 group plans involving adjoining landowners who agreed to cooperate in doing conservation work that affected their land.

Conservation Applied to the Land

Cooperators in soil conservation districts continued in fiscal 1963 to make good progress in getting conservation practices applied to the land in accordance with their conservation plans. Special programs in certain localities, such as watershed projects and the Great Plains Conservation Program, accelerated the work through cost-sharing or additional technical assistance. Most land treatment was done, however, by individual landowners using technical assistance provided by the Soil Conservation Service through the districts. Many cooperators also received cost-sharing from the Agricultural Conservation Program.

Planting of grass and trees and the use of conservation cropping systems were prominent among practices of widespread application in fiscal 1963. A total of 120 individual practices, some of restricted application, were reported as established under all programs providing assistance.

Assistance to ACP Cost-Sharing

The Soil Conservation Service continued to provide onsite technical services for permanent type practices in the Agricultural Conservation Program of cost-sharing for soil, water, and wildlife conservation practices.

The Soil Conservation Service received 387,594 and serviced 372,519 ACP referrals for the program year 1962, which was completed during the fiscal year 1963.

Watershed Protection and Flood Prevention (Public Law 566)

The Soil Conservation Service received 234 applications for assistance on small watershed projects under the Watershed Protection and Flood Prevention Act (Public Law 566, as amended) in fiscal year 1963—a 19 percent increase over 1962 and the fourth year of an upward trend. By the end of the year, 48 States and Puerto Rico had submitted a total of 1,936 applications for Federal assistance.

A total of 121 watersheds were authorized for planning, a record number for any one year. To date, 46 percent of the applications received, or a total of 890, have been approved for planning.

Eighty-eight projects were approved for operations during fiscal year 1963, the largest number in any year since the program was initiated. A total of 473 projects have now been approved for Federal assistance in the installation of works of improvement. This approval assures Federal help for technical assistance to plan and install land treatment measures and make the engineering surveys and designs required in advance of construction. Initial agreements for construction were signed in 78 projects located in 34 States.

Structural measures installed in fiscal 1963 with watershed protection (Public Law 566) funds included 235 floodwater-retarding structures and 302 miles of stream

SUMMARY OF PROGRESS, FISCAL YEAR 1963

Progress items	Unit	Accomplished in fiscal year 1963			On the land June 30, 1963
		By use of funds under all SCS programs	By State employees & other agencies [1]	Total reportable progress	
CONSERVATION PRACTICES APPLIED					
Bedding	Acres	26,032	1,315	27,347	356,988
Brush and weed control	Acres	3,717,830	14,626	3,732,456	26,818,374
Irrigation canal or lateral	Miles	450	88	538	31,806
Cattle walkway	Miles	18	—	18	225
Chiseling	Acres	383,781	244	384,025	2,234,007
Clearing and snagging	Miles	178	—	178	1,208
Conservation cropping system	Acres	22,797,057	112,010	22,909,067	131,704,734
Contour farming	Acres	6,054,495	50,107	6,104,602	39,204,454
Contour furrowing	Acres	42,529	7	42,536	564,150
Contouring orchard, etc.	Acres	9,690	283	9,973	332,064
Controlled burning	Acres	364,676	10	364,686	—
Cover and green manure crop	Acres	4,948,501	36,274	4,984,775	—
Critical area planting	Acres	48,314	19,799	68,113	1,134,189
Cut-back border	Feet	419,015	6,840	425,855	11,480,706
Dam, diversion	No.	901	2	903	—
Dam, multiple-purpose	No.	210	3	213	5,438
Debris basin	No.	3,715	38	3,753	79,159
Range deferred grazing	Acres	17,108,736	4,822	17,113,558	48,539,389
Desilting area	Acres	944	1	945	2,687
Dikes and levees	Miles	282	15	297	7,112
Irrigation ditch & canal lining	Miles	1,619	29	1,648	15,688
Ditchbank seeding	Miles	1,232	32	1,264	14,094
Diversions	Miles	3,242	68	3,310	82,458
Dune stabilization	Acres	1,695	2	1,697	64,498
Emergency tillage	Acres	300,471	—	300,471	—
Farm pond	No.	52,185	1,701	53,886	1,263,472
Farmstead windbreak	Acres	19,442	2,371	21,813	924,631
Field border planting	Miles	1,167	77	1,244	36,520
Irrigation field ditch	Miles	3,570	529	4,099	108,147
Firebreaks	Miles	12,801	198	12,999	115,238
Fish and crop rotation	Acres	13,324	—	13,324	19,358
Fishpond stocking	No.	35,816	535	36,351	619,180
Floodwater diversions	Feet	51,202	1,000	52,202	913,747
Floodway	Miles	22	1	23	392
Grade stabilization structure	No.	7,344	174	7,518	103,251
Grass in rotation	Acres	1,303,469	21,940	1,325,409	—
Grass waterway or outlet	Acres	122,426	2,544	124,970	1,876,512
Hayland planting	Acres	349,639	8,509	358,148	4,028,554
Hedgerow planting	Miles	566	82	648	26,443
Hillside ditch	Miles	426	104	530	8,766
Irrigation pipeline	Miles	3,188	119	3,307	34,226
Irrigation storage reservoir	No.	1,570	43	1,613	32,860
Irrigation system, sprinkler	No.	3,262	100	3,362	72,482
Irrigation system, surface and subsurface	No.	4,576	141	4,717	83,257
Irrigation system, tailwater recovery	No.	1,869	46	1,915	5,112
Irrigation water management	Acres	2,404,180	4,370	2,408,550	8,600,236
Drainage land grading	Acres	34,021	2,028	36,049	120,595
Irrigation land leveling	Acres	473,550	37,575	511,125	7,587,890
Land smoothing	Acres	339,513	2,980	342,493	3,482,440
Livestock exclusion	Acres	732,041	4,718	736,759	14,045,887
Minimum tillage	Acres	801,072	5,479	806,551	3,769,831
Drainage main or lateral	Miles	8,559	524	9,083	264,602
Mole drain	Miles	281	17	298	1,156
Mulching	Acres	25,271	28	25,299	249,854
Mulch planting	Acres	39,941	—	39,941	131,922
Woodland natural seeding	Acres	89,196	406	89,602	2,235,926
Obstruction removal	Acres	21,419	204	21,623	545,441
Pasture hayland renovation	Acres	1,346,595	19,192	1,365,787	14,591,500
Pasture planting	Acres	2,142,269	37,410	2,179,679	38,093,756
Pipeline for stockwater	Miles	1,189	56	1,245	9,178
Pitting	Acres	10,701	—	10,701	145,074
Pond sealing or lining	No.	583	2	585	6,066
Pasture proper use	Acres	6,609,980	25,386	6,635,366	23,506,546
Range proper use	Acres	64,657,545	15,148	64,672,693	175,723,940
Woodland proper grazing	Acres	1,232,311	359	1,232,670	7,642,008
Pumped well drain	No.	4	—	4	140
Pumping plant, water control	No.	2,041	79	2,120	29,855
Range renovation	Acres	81,245	—	81,245	1,731,478
Range seeding, converted land	Acres	156,517	204	156,721	3,538,413

channel improvement. The works of improvement installed in these watersheds since the first projects were authorized in 1956 include 1,115 floodwater-retarding structures and almost 1,000 miles of stream channel improvement.

Local sponsoring organizations have acquired more than 14,500 land easements and rights-of-way valued at about $17 million. They have also signed maintenance agreements providing for annual inspection and maintenance of all completed structural measures.

All land treatment and structural measures have been completed in 55 projects located in 27 States. Eleven projects were completed in fiscal year 1963. Structural measures have been completed in 40 additional projects which will remain in an active status to complete land treatment or minor structural work such as seeding of dams. A total of 37 States now have one or more projects with all structural measures complete.

Pilot Watershed Protection Projects

Fiscal 1963 was the 10th year since the 62 pilot watershed protection projects were started in cooperation with local sponsors. Eight were later discontinued at the request of sponsors, leaving 54 to be completed. By June 30, all works of improvement had been installed on 45 projects. Four more are scheduled for completion in 1964, 2 in 1965, and 3 will continue in operation after 1965.

Flood Prevention in Authorized Watersheds

Work plans were prepared in fiscal 1963 for 11 subwatersheds covering about 874,000 acres in the 11 large watersheds authorized for flood prevention work. To date 225 work plans have been prepared for 18,570,000 acres or 60 percent of the total authorized areas.

The works of improvement installed in these watersheds in fiscal 1963 include 206 floodwater-retarding structures and 44 miles of channel improvement, bringing the totals to date for these items to more than 1,450 floodwater-retarding structures and 464 miles of channel improvement.

River Basin Surveys

The Soil Conservation Service participated with other Federal and State agencies in surveys of 25 major river basins in fiscal year 1963, under provisions of Section 6 of Public Law 566, as amended. These surveys aim to develop comprehensive plans for the coordinated and orderly development, management, and use of the water and related land resources of the basins, or are concerned with special water problems in certain river basins.

SCS has been assigned overall responsibility for the Department of Agriculture's participation in these activities and heads advisory committees in Washington and at field locations to coordinate the participation of USDA agencies. The SCS, Forest Service, and Economic Research Service are taking part in the surveys and are represented on the committees.

Great Plains Conservation Program

In the 383 counties designated for the Great Plains Conservation Program, the Soil Conservation Service in fiscal 1963 assisted 2,852 farmers and ranchers prepare complete land use and conservation plans on 5,051,330 acres as a basis for new cost-sharing contracts with the Department of Agriculture.

New contracts in 1963 brought the total under the program to 12,393 covering 28,438,161 acres. At the end of the year more than 4,000 applications were pending. Since the program started in 1957, planned work had been completed on 2,293,088 acres under 1,504 contracts.

Conversion of low-grade cropland to permanent vegetation mainly grass, is the major feature of the Great Plains Conservation Program. Contracts to date provide for conversion of 861,303 acres of cropland, or 23 percent of that in the farms and ranches before planning.

Soil Surveys

Field mapping was completed during the 1963 fiscal year on 68,324,153 acres of detailed soil surveys and 1,661,270 acres of reconnaissance surveys, making a total of 69,985,423 acres. This includes 5,221,005 acres mapped by cooperating agencies participating in the National Cooperative Soil Survey.

The 1963 accomplishment compares to 65,040,992 acres of detailed mapping and 3,632,110 acres of reconnaissance mapping in 1962, making a total of 68,673,102 acres. The added emphasis on detailed mapping more than offset the reduction in reconnaissance surveys and resulted in a net increase of 1,312,321 acres in total area mapped in 1963. Mapping by other agencies increased 1,988,896 acres from the 1962 level of 3,259,544 acres.

As of June 30, 1963, more than 785 million acres had been mapped in detail for use in conservation planning of farms, ranches, watersheds, and for other uses. This is about 35 percent of the total land area of the United States and 75 percent of the land in farms in soil conservation districts. It is about 41 percent of the area on which detailed surveys are needed.

In addition, about 13 million acres are covered by reconnaissance surveys, providing soil information of some intensity on at least 798 million acres.

The use of soil surveys by both public and private agencies and by individuals is increasing steadily. More attention is being given to presenting and explaining new published soil surveys to users and potential users.

A large group of nonagricultur-

SUMMARY OF PROGRESS, FISCAL YEAR 1963

Progress items	Unit	Accomplished in fiscal year 1963			On the land June 30, 1963
		By use of funds under all SCS programs	By State employees & other agencies [1]	Total reportable progress	
CONSERVATION PRACTICES APPLIED (Continued)					
Range seeding	Acres	355,084	1,945	357,029	7,490,397
(Total range seeding)	Acres	(511,601)	(2,149)	(513,750)	(11,028,810)
Irrigation pit or regulating reservoir	No.	2,401	24	2,425	31,077
Regulating drainage water	Acres	61,037	247	61,284	643,079
Rock barrier	Feet	20,753	293	21,046	373,652
Rotation-deferred grazing	Acres	2,951,383	1,455	2,952,838	8,892,505
Row arrangement	Acres	180,688	23	180,711	1,399,915
Rotation grazing	Acres	2,946,094	19,878	2,965,972	10,955,443
Spoilbank spreading	Miles	5,531	169	5,700	104,778
Spring development	No.	3,845	64	3,909	71,029
Stock trail	Miles	206	—	206	2,530
Streambank protection	Miles	186	1	187	3,320
Stream channel improvement	Miles	752	4	756	7,216
Stream channel stabilization	Feet	110,387	—	110,387	2,405,738
Stripcropping, contour	Acres	208,630	6,905	215,535	4,866,335
Stripcropping, field	Acres	135,829	300	136,129	3,305,588
Stripcropping,wind	Acres	312,426	3,215	315,641	10,872,486
(Total stripcropping)	Acres	(656,885)	(10,420)	(667,305)	(19,044,409)
Structures, water control	No.	83,070	2,400	85,470	1,264,328
Stubble mulching	Acres	3,083,769	896	3,084,665	16,968,527
Subsoiling	Acres	422,553	37	422,590	185,187
Drainage field ditch	Miles	7,673	216	7,889	132,390
Terrace, basin	Miles	91	8	99	853
Terrace, gradient	Miles	21,150	308	21,458	862,784
Terrace, level	Miles	15,008	211	15,219	322,921
Terrace, parallel	Miles	3,709	72	3,781	26,645
(Total terraces)	Miles	(39,958)	(599)	(40,557)	(1,213,203)
Tile drain	Miles	27,599	1,526	29,125	555,474
Tile system structure	No.	9,780	462	10,242	122,672
Toxic salt reduction	Acres	66,344	6,018	72,362	808,985
Tree planting	Acres	334,512	18,807	353,319	9,792,444
Trough or tank	No.	8,767	524	9,291	234,760
Vegetative barrier	Miles	292	100	392	5,214
Vertical drain	No.	45	—	45	1,295
Waterspreading	Acres	35,709	101	35,810	772,027
Well	No.	5,297	682	5,979	268,933
Wildlife habitat preservation	Acres	696,004	35,657	731,661	5,892,491
Wildlife wetland development	Acres	66,820	2,053	68,873	640,656
Wildlife habitat development	Acres	145,802	5,582	151,384	2,378,766
Wildlife wetland preservation	Acres	116,278	10,708	126,986	891,216
Wildlife watering facility	No.	216	3	219	3,808
Woodland direct seeding	Acres	23,541	7,616	31,157	256,565
Woodland harvest cutting	Acres	791,504	8,719	800,223	11,396,167
Woodland intermediate cutting	Acres	822,909	5,149	828,058	11,483,069
Woodland interplanting	Acres	27,778	376	28,154	608,953
Woodland pruning	Acres	14,805	2,145	16,950	277,974
Woodland thinning	Acres	60,875	2,211	63,086	1,520,387
Woodland underplanting	Acres	29,506	513	30,019	571,622
Woodland weeding	Acres	448,452	12,442	460,894	7,664,598
LAND USE CONVERSIONS [2]					
Cropland to grassland	Acres	—	—	—	4,783,033
Cropland to woodland	Acres	—	—	—	560,184
Cropland to wildlife—recreation	Acres	—	—	—	193,113
Cropland to "other"	Acres	—	—	—	1,168,395
All other uses to cropland	Acres	—	—	—	1,223,147
All other uses (except cropland) to wildlife-recreation	Acres	—	—	—	717,310

[1] Includes certain practices on the lands of new SCD cooperators applied without SCS assistance.

[2] Conversions on the land June 30, 1963, are estimates of conversions since July 1, 1962.

ists—State, city, and town planning groups, and others—have become interested in the use of soil surveys in urban-fringe areas. Cost-sharing by local groups, up to about one-half the cost of the soil mapping, is becoming common.

The SCS participated in soil surveys in 20 urban fringe areas under formal cost-sharing agreements with cities and towns in fiscal 1963, and made surveys in at least 50 others, mapping approximately 1 million acres for immediate use in urban planning.

Land Today Has New Values

THE advances in resource development over the past 2 years are notable because they have occurred in so short a space of time. To me, this is a most encouraging sign that we are beginning to better understand the causes of change in rural America, and to mold change to the advantage of people. . . .

Many rural communities have discovered new economic opportunities by growing livestock and timber on land that had been producing crops already in surplus. Soil and water conservation districts have long provided leadership in this field, for shifting land to uses for which it is better suited has always been a basic part of your program. Cooperators in your nearly 3,000 districts are converting about 2.5 million acres of cropland to less intensive uses each year. This land is not being idled. Rather it is being converted to a use for which the soils are better suited—the production of grass and timber and to wildlife and recreation uses.

More than one-fourth of the cropland going permanently to grass is located in the Great Plains where the Great Plains Conservation Program has helped to speed up this process. To date, nearly 14,000 long-term cost-sharing contracts will convert 1 million acres to grass, or 23 percent of the cropland on these farms and ranches.

Finally, even more concentrated efforts toward land conversion and resource development will be planned in the new Resource Conservation and Development projects, also authorized by the Food and Agriculture Act of 1962. We have received applications for assistance from local sponsors of about 20 of these proposed projects covering about 30 million acres in 15 States.

RC&D projects are a new approach to assisting rural communities. They are intended to carry out a program of land conservation and land utilization in an area where acceleration of current conservation activities, plus the use of new authorities, will provide additional income and job opportunities to its people. . . .

Secretary of Agriculture Orville L. Freeman.

The job of soil conservation districts has changed greatly since the first one was organized nearly 27 years ago. The greatest changes have come in the past few years. Once you worked almost solely with the individual farmer and rancher, helping him plan and install a conservation program tailored to his land and his needs. That is still a big part of your job, and it will remain so. In the past quarter century, you have built an unchallenged reputation of leadership in soil and water conservation and agricultural land use.

Your challenge today, however, is to move boldly into community-wide resource development action, providing the one element that will make Rural Areas Development really work: local initiative and local coordination and direction. I urge you to be in the lead in RAD activities in your home community, for RAD is on the move and it will continue to gain momentum.

The dimensions of the resource job we face are staggering. Land today has new values beyond the production of food and fiber. It is looked upon as a source of community stability and economic growth, as the development base for new jobs, for recreational opportunities, for living and working space and other benefits that relate to nonfarm as well as to farm and ranch people.

As you know, a major objective of USDA programs in the past 3 years has been to help improve farm income, to broaden the income base for farmers and ranchers, and to help them shift land that is either unsuited or unneeded for cultivation away from the production of surplus crops.

The Department's land and water conservation efforts which contribute to this are decentralized. They are controlled and managed at the local level by local people—responsible local citizens like the officers of soil and water conservation districts. These are not Federal programs. They are local programs with Federal assistance. We want them to remain that way.

The progress of the past 2 years reflects the wisdom of this approach . . . and the promise of the future depends on how well you and other leaders move ahead to the job at hand.

—Excerpts from address by Secretary of Agriculture Orville L. Freeman before the National Association of Soil and Water Conservation Districts, Kansas City, Mo., Feb. 4, 1964.

Girl Scout Cookies Help Build "Sweetest Lake in the World"

By J. R. Sasser

THE locally known "Sweetest Lake in the World" in southeastern Tennessee just above the Mississippi line was built in major part with cookies—300,000 boxes of Girl Scout cookies to be exact.

Turning the first spadeful of soil for the multiple purpose lake. L. to r.: Kate Kephart; Edward F. Thompson, president of the Tenn-Ark-Miss Council of Girl Scouts; J. A. "Happy" Craft, contracting officer, Porters Creek Watershed District; and Denise Lowery.

The 70-acre multiple-purpose reservoir, near Middleton, was built cooperatively by the Porters Creek Watershed District and the Tennessee - Arkansas - Mississippi Council of Girl Scouts. The finished dam cost $88,938.63, of which $49,781.42 was borne by the young "soil stewardesses." The Federal share of the job was paid from accelerated public works funds made available because Hardeman County, in which the project is situated, was designated for aid by the Area Redevelopment Administration. Federal technical and financial aid was made available by the Soil Conservation Service through the Watershed Protection and Flood Prevention Act (Public Law 566), with construction contracts administered by the Porters Creek Watershed District.

After dedication of the structure this spring, the cost-sharing Girl Scout Council planned immediately the start of work developing 4 separate camps around the lake, each serving 120 to 150 girls at a time.

"We do not think in terms of dollars, but cookies," Miss Virginia Jones, executive director of the Memphis-based Council, said. "The Girl Scouts receive money for developing camps from the sale of Girl Scout cookies. So we say our share of the lake cost 300,000 boxes of cookies, not $49,781.42."

The dam originally was one of a network of 14 single-purpose flood prevention dams planned to reduce Porters Creek's damaging floods. The site was partly on a 1,150-acre tract owned by the Girl Scout Council, which already had planned a lake there before it knew about the flood detention dam. An agreement was reached between the local sponsors and the Council to share the cost of enlarging the reservoir for multiple-purpose use, including swimming, boating, fishing, and other recreational activities.

Virginia Jones, Executive Secretary of the Tenn-Ark-Miss Council of Girl Scouts.

The Porters Creek project is sponsored by the Hardeman County Soil Conservation District and the Porters Creek Watershed District. A small portion extending into Benton and Tippah counties in Mississippi is sponsored by the Northeast Mississippi Soil Conservation District and the Porters Creek Drainage District.

Work was started on the "dam that cookies built" in May 1963 and completed in September, about 4 months ahead of schedule.

The author is State conservationist, Soil Conservation Service, Nashville, Tenn.

"We are delighted that this major step in our watershed has been completed, and we think it will mean much to the Girl Scouts, and much to us," Watershed District President Jim Lenoir of Bolivar said. "The dam will go a long way, of course, toward reducing flood damage; and we hope that erosion, flooded crops, and impassable roads will soon be a thing of the past here."

The dam will capture 289-acre-feet of potential floodwater, and then release it slowly at a controlled rate. When all works of improvement in the Porters Creek project are completed, flood damage will be reduced by an estimated 69 percent. "Sweetest Lake" is the third dam to be completed in the project, and two more are slated for completion in 1964.

People's Souls and Soils—

Both Concern Georgia Minister

PEOPLE—their souls and soils are the main concern of the Rev. Curtis Tillman as pastor of four Georgia churches on the Methodist rural charge in and near Pearson and as chaplain of the Satilla Soil and Water Conservation District.

"How folks treat their souls and their soils are parallel," Tillman will tell you. "I've noticed that the people who protect and wisely use the natural resources given to them by God also usually have deep religious convictions and meet their moral obligations."

Tillman has been one of the leading ministers in Georgia who have for 4 years been boosting the State's natural resources by serving as chaplains of soil and water conservation districts. The theme this year of "Soil Stewardship Week," which districts throughout the Nation observe May 3-10, is particularly appropriate: "To Each Among Us—A Share."

"Go into any community," Tillman says. "Look at their churches and church grounds. If you see pretty buildings and well kept grounds, you'll most probably also see nearby cultivated fields, green pastures and pines, modern schools, attractive homes—in fact, a prosperous community. And you'll also find friendly, contented people."

He describes Cook County, where he is now living, as an example of this type of country: "It's one of the cleanest counties I know—morally and physically."

Born and reared on an Appling County farm, Tillman farmed for several years after finishing high school at Surrency. Denied the opportunity of going to college, he has continued his education by completing several correspondence courses, reading, and being a good listener and keen observer.

He has been a public school teacher, a Scoutmaster, youth leader, and a sparkplug of community activities. He is the author of a book of devotions, poems, and prayers, entitled, "I Know a Place," and over the years has written columns and articles on religious and conservation topics for weekly and daily newspapers.

He delivers four sermons every Sunday, and conducts other services at his rural churches at Pearson, Kirkland, Axson, and Sweetwater.

He was named "Rural Minister of the Year" in Georgia in 1962 by the *Progressive Farmer* magazine, while he was pastor of the Lenox-Antioch Methodist Charge at Lenox and chaplain of the Alapaha Soil and Water Conservation District. While he was minister of the Hebardville-Jamestown Methodist Charge near Waycross, he was chosen as "Rural Charge of the Year" in the Waycross district.

Rev. Curtis Tillman is chaplain of the Satilla Soil and Water Conservation District, Georgia.

Tillman, who has a full home life with his wife and five children, mingles with the people of his community and even helps them with their farm chores. He talks their language—and the language of the conservationist.

—WALTER S. ALLEN

DELAWARE BEACH OWNER STOPS WAVES' DAMAGES

By Gordon S. Smith

SAM Houston Showell of Delaware has effectively stilled once damaging waves along a 1,400-foot beach near Millsboro on Indian River Bay back a short way from the Atlantic Ocean. He performed this feat by sloping a high bank that was cutting rapidly toward his beach cottages and by planting the beach to grasses able to stand up against even high storm tidewater.

A 2,000-acre grant from the English Crown enticed Showell's forebearers to this fertile lowland in 1677. The Showells were good stewards of their soil, and the 320-acre "White House Farm" Sam Showell took over in his turn provided a good living for generations. It did, that is, until a declining broiler business and small profits from row crops led the Showells to decide to develop their overall 1¼-mile waterfront as a recreation area.

Starting in 1947, Showell and his three grown sons built, a few each year, eight family-size cabins on the shady shoreline. Their well-managed farm woodlot provided the pine lumber for the buildings. They also converted a broiler house into four more family-size units and, farther down the beach, built a marina for fishing and boating enthusiasts. They converted an old pasture into a grass runway and parking area for flying vacationers.

But the troublesome beach erosion problem threatened the Showells' promising recreation project. Caused by wind and wave, it spread along the quarter-mile-long beach and was heading for the cottages at a rate of 2 feet a year. Something had to be done or the new buildings would be dumped into the bay in a few years.

"The high bank there was the problem," Showell recalls. "It needed to be sloped and protected with grass like any eroding farmland. Family records show that in 1828 our beach front was 240 feet farther out in the bay. I can remember when it was several yards from where it is today."

Using their own equipment, the Showells' bulldozed the 10-foot high bank into a gentle, 3:1 slope stretching 50 feet from tree line to waterline. Fallen trees and stumps had to be cleared away, but tall pines still standing were left to provide a 15-foot shady area in front of the cottages. Four thousand cubic yards of fill left over from the beach project was used to build up a low area near the marina.

Having been a cooperator with the Sussex Soil Conservation District for several years, Showell turned to the district and the assisting Soil Conservation Service for technical advice on the final grading and grass planting for the new beach.

Showell planted two lines of saltmeadow cordgrass clones along the high tide line, where it formed a tight cover for the sand and stopped cutting action of waves at the toe of the slope. Next came four lines of American beachgrass clones, a tough perennial that spreads rapidly even in low-fertility, sandy soil. Beachgrass grows up to 2 feet tall and helps slow down waves.

Showell then sprigged Midland bermudagrass on a 10-foot-wide

The author is field information specialist, Soil Conservation Service, Upper Darby, Pa.

The trailer park and recreation area of Sam Showell's White House Farm on Indian River Bay in Delaware.

Shore erosion like this threatens beach cottages along the Atlantic Coast.

Sam Showell kneels on his grassed beach at the high water line of the big storm of March 1962.

strip across the beach. This grass formed a tight sod on the critical part of the beach. Finally, he seeded Kentucky 31 tall fescue on the top 35 feet of the slope. This formed a healthy, deep-rooted, lawn-type grass that, when properly fertilized, resists heavy foot traffic.

A Jute fiber mesh, that decays after a few months, was used to protect a few critical areas before the grass provided the cover.

Showell's grass-covered beach proved its value when the March 1962 storm spread destruction along the Atlantic Coast. Although 8-foot flood-tides pounded the area for 2 days, and nearby beaches were ripped to shreds, the high waves rolled harmlessly up the long, protected slope on White House Farm.

"The new beach cost us $3,500," Showell says, "but, in that one storm, it more than paid for itself."

Actually, the beach has gained a few feet of new sand since it was reshaped and grassed. Proper maintenance is the real secret—fertilizing and mowing keep the grass in good shape.

"Our recreation enterprise is growing larger each summer, but parts of the farm are still used for agriculture," Showell points out. "A neighbor rents part of our land for soybeans and corn, but all of it could be turned back to farming if the need should arise. In the meantime, we plan to make our recreation projects keep the farm on a paying basis."

◆

ELFAC—Electronic Farm Accounting—is a system of business record keeping with an electronic computer. It is a creation of Farm Management Extension people in 13 Northeastern States, and is designed to help farmers keep better financial records at a minimum cost for income tax and other purposes. The services of ELFAC are hired by farmers just as they might hire an accountant. Because the bookkeeping is done by machine and the system is operated on a nonprofit basis, the cost of ELFAC is reported to be relatively small—for example, approximately $1.25 per cow a year to a dairy farmer.

◆

USDA studies found that a ton of wheat straw mulch an acre cut erosion to a minimum and that 2 tons stopped runoff and soil loss in fallow plots.

GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D. C. 20401

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(GPO)

If your address changes, please notify us of your complete new adress, including zone or RFD number, and include old address with our code number as shown above.

SOIL CONSERVATION IN SOUTH AFRICA. By J. C. Ross. 84 pp. 1963. Department of Agricultural Technical Services. Printed in the Republic of South Africa by Government Printer. Pretoria.

This exceedingly well written publication presents an up-to-date report of progress of the soil conservation program in South Africa since enactment of the soil conservation act of 1946.

J. C. Ross skillfully maintains reader interest through presentation of a brief physical and human background, the problems the nation faced, and what was done to meet the problems.

During the 12 years a soil conservation act has been in active operation, 734 soil conservation districts have been proclaimed, covering 98 percent of the total private lands in South Africa. More than 22,000 detailed farm plans have been prepared and are being applied on the land.

The soil conservation act provides for creation of a democratic soil conservation board of 15 members to advise and assist the ministry. The act provides that any defined area of land may be proclaimed as a soil conservation district upon request of the landowners concerned. Such a proclamation places an obligation upon every owner of land in the "district" to reclaim, conserve, or improve his land as may be necessary.

As soon as a district is proclaimed, a soil conservation district committee is established by the minister to manage the affairs of the district. Members of the committee consist largely of local farmers elected by the landowners. Duties of the committee are to prepare a soil conservation district scheme, and to see that a detailed scheme (called a farm plan) is prepared, within the broad framework of the district scheme, for every individual property in the district.

The act provides that the State may proclaim any area as a soil conservation area if conservation needs require.

The Minister is empowered to grant financial assistance in carrying out provisions of the farm plan or other measures approved by the minister. The act provides for appropriate penalties, fines or imprisonment, or both, for failure to carry out provisions of the approved soil conservation scheme.

—CARROLL DWYER

Thou shalt cherish thy soil and keep it.

EDITOR RETIRES

Frank B. Harper, Editor of *Soil Conservation* for the past 3 years, retired March 31 because of ill health. He had worked for the Soil Conservation Service nearly 28 years, the past 20 in Washington.

The editorial work will be carried on by Ben Osborn, who came to the Washington Information Division in 1955 after 20 years in field offices of the Soil Conservation Service.

◆

Residue kept on your fields builds up the organic matter of the soil and reduces wind and water erosion.